Culturally & Environmentally Responsive Architecture & Planning

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Speaker Profile: Daniel J. Glenn, AIA, NCARB

Daniel Glenn is an NCARB-certified with twenty-four years of experience in the design of affordable, sustainable architecture in urban and rural environments across the United States and in Central America. He is the Principal of Glenn & Glenn Architects/ Engineers, PLLC, an Indian-owned design and planning firm based in Seattle, WA and Billings, MT. Much of Mr. Glenn's work focuses on sustainable design for tribal communities, rooted in his heritage from the Crow Tribe of Montana. His design work has received national and regional recognition, including his design of the Little Big Horn College Campus, in Crow Agency, MT, featured in the documentary film, *Aboriginal Architecture Living Architecture,* and the recently completed University of Montana's Payne Family Native American Center in Missoula, Montana, featured in *Indian Country Today Magazine*. The project is designed to a LEED Platinum standard and to reflect the diverse cultures of Montana's twelve tribes. He is on the Board of Directors of Navajo FlexCrete, a subsidiary of the Navajo Housing Authority, and is a regularly invited speaker on sustainable design at professional and academic conferences, including HUD Office of Native American Program events nationally. His urban design work includes the master planning of a dozen HUD HOPE VI urban revitalization demonstration projects around the country, including the award-winning Indianapolis community, Concord Village/ Eagle Creek. An MIT-trained specialist in the design of green affordable housing, Mr. Glenn was the founding Design Director of the ASU Stardust Center for Affordable Homes and the Family in Phoenix, AZ and Executive Director of Environmental Works Community Design Center in Seattle, WA. He has taught architectural design and sustainable planning at Arizona State University, the University of Washington, Montana State University, the Boston Architectural Center, the Universidad Autonoma de Xochimilcho in Mexico City and the School of Planning and Architecture in New Delhi, India. Four of his recent projects have been selected to be included in *Design Re-Imagined: New Architecture on Indigenous Land,* a new book on contemporary Native American architecture by to be published by University of Minnesota Press in Spring 2012.

Sustainable Architecture: Not Just A Buzz Phrase

Not sure what's meant by sustainable architecture?. Here's an overview of this growing trend.

Most environmentally aware homeowners work to reduce their impact on the Earth at home by, for example, using compact florescent light bulbs, fixing faucet leaks and plugging cracks in the foundation. Some might even install low-flow toilets or skylights, or purchase more eco-friendly installation for their homes. But an entire field has emerged, typically referred to as sustainable architecture, to encompass the many environmentally-conscious practices available to design and create buildings. What is sustainable architecture, and how is it impacting the environment?

To understand sustainable architecture, one must know the term LEED, as in Leadership in Energy and Environmental Design. LEED, created by the non-profit U.S. Green Building Council (USGBC) more than a decade ago, is an internationally recognized certification system for green building.

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U.S. Embassy Jakarta Mission Statement

Based on mutual respect and shared values, the U.S Mission works with Indonesia to strengthen democracy, sustain the environment, promote prosperity, enhance understanding and ensure security for our people, our nations, and our region.

Inside this issue:

Green Building in the U.S

What Is Green Building?
The buildings in which we live, work, and play protect us from nature's extremes, yet they also affect our health and environment in countless ways. As the environmental impact of buildings becomes more apparent, a new field called "green building" is gaining momentum.

Green, or sustainable, building is the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's life-cycle from siting to design, construction, operation, maintenance, renovation and deconstruction. This practice expands and complements the classical building design concerns of economy, utility, durability, and comfort. Green building is also known as a sustainable or high performance building.

Green buildings are designed to reduce the overall impact of the built environment on human health and the natural environment by:

- Efficiently using energy, water, and other resources
- Protecting occupant health and improving employee productivity
- Reducing waste, pollution and environmental degradation

Green Building History in the U.S.
Some practices, such as using local and renewable materials or passive solar design, date back millennia – the Anasazi in the Southwest built entire villages so that all the homes received solar heat in the winter. The contemporary green building movement arose out of the need and desire for more energy efficient and environmentally friendly building practices. The oil price increases of the 1970s spurred significant research and activity to improve energy efficiency and find renewable energy sources. This, combined with the environmental movement of the 1960s and 1970s, led to the earliest experiments with contemporary green building.

The green building field began to come together more formally in the 1990s. A few early milestones in the U.S. include:

- American Institute of Architects (AIA) formed the Committee on the Environment (1989)
- Environmental Resource Guide published by AIA, funded by EPA (1992)
- EPA and the U.S. Department of Energy launched the ENERGY STAR program (1992)
- First local green building program introduced in Austin, TX (1992)
- U.S. Green Building Council (USGBC) founded (1993)
- "Greening of the White House" initiative launched (Clinton Administration 1993)
- USGBC launched their Leadership in Energy and Environmental Design (LEED) (1998)

Read more about this topic at:
http://goo.gl/OpfJ1

Related sources:
Energy Star Program:
http://www.energystar.gov/
LEED: **http://goo.gl/YFOu**
White Paper on Sustainability: A Report on the Green Building Movement
http://goo.gl/inB3h
The Federal Commitment to Green Building: Experiences and Expectations:
http://goo.gl/qKfXN

Articles

The Greening of U.S Architecture: Building a Sustainable Future/Lauren Monsen. *America.gov,* July 7, 2009.
Washington — With many residential and corporate clients now requesting an environmentally friendly approach to their design needs, so-called "green architecture" has become an increasingly hot commodity, and a number of U.S. universities have responded by developing sustainable-design courses for their architecture programs…. Two architecture professors told *America.gov* how architecture is evolving to meet new energy requirements — and how young architects-in-training are learning new skills to meet the challenges of the 21st century. Full text is available online at:
http://goo.gl/jM8TS

Quantifying Sustainability: How to Determine the Value of Green Buildings/LEED, 2009. 9p.
The innovative LEED projects in this report illustrates how a focus on sustainability adds value—not only in terms of quantifiable benefits, such as decreased energy and maintenance costs—but many of the qualitative benefits are helping to increase a building's profile in the community, helping companies and organizations fulfill their missions and creating educational opportunities for staff, tenants, and students. Even though standardized methods do not yet exist to quantify these important benefits, the hope is that the marketplace will soon respond, providing a way to truly reflect the value of green building. This full report is accessible online at: **http://goo.gl/327ZN**

The Green House of the Future/Alex Frangos. *The Wall Street Journal Online*, April 27, 2009.
What will the energy-efficient house of the future look like? It could have gardens on its walls or a pond stocked with fish for dinner.

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Articles

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It might mimic a tree, turning sunlight into energy and carbon dioxide into oxygen. Or perhaps it will be more like a lizard, changing its color to suit the weather and healing itself when it gets damaged. Those are just a handful of the possibilities that emerged from an exercise in futurism. The Wall Street Journal asked four architects to design an energy-efficient, environmentally sustainable house without regard to cost, technology, aesthetics or the way we are used to living. Full article is accessible online at: **http://goo.gl/S3Eyz**

Architects Look to Nature and Each Other/Bruce Odessey. *America.gov*, January 18, 2008
The basic look and shape of American houses and business places haven't changed much for a long time. Now, however, energy and environmental challenges are encouraging new building materials, new ways to design buildings, and new respect for nature. Full text is available at: **http://goo.gl/8o8uf**

Please contact the IRC to get the full text of the articles listed below.

Using Higher Education-Community Partnership to Promote Urban Sustainability/Carina Molnar, et.al. *Environment,* January/February 2011. Vol. 53, No. 1, p. 18-28.
Urban Sustainability Extension Service (USES) program would work as an operationally reflective initiative whereby curricula and place based learning opportunities would vary on a year or semester basis. Students and researchers will work with local stakeholders to identify relevant and timely projects that directly serve community needs, as defined by the USES board.

Integrated Greenspace Networks: A Smart Option/Anna Read and Isabel Fernandez. *Public Management*, November 2010. Vol. 92 Issue 10, p. 16-19.
The article discusses the benefits in designing and implementing green infrastructure in communities. It explores the significance of investing in green infrastructure network, incorporating a comprehensive parks, as well as open space system since it provide communities with wide range of social and ecological advantages. Furthermore, it points out that creating spaces does not only serve important environmental and ecological functions but provide community members with asset and benefits.

Turning Over a New Leaf: Municipalities Use Green Infrastructure to Ease Flooding and Pollution/Elaine Bloom and Karin Verschoor. *New York State Conservationist*. August 2010.
Cities and suburbs have spent billions on "grey infrastructure" like huge concrete holding tanks and underground drains to alleviate these flooding and pollution problems. Some communities in the State of New York in the U.S are turning over a new leaf, using "green infrastructure" to solve an array of urban environmental problems. In the case of storm runoff, the aim is to handle it the way Mother Nature does: with plantings, natural landscaping and materials that allow rainwater and melting snow to filter into the ground and recharge groundwater aquifers.

Multimedia Resources

Photo Gallery-Green Design: Green Buildings
According to the U.S. Environmental Protection Agency, as the environmental impact of buildings becomes more apparent, a new field called "green building" is gaining momentum in the United States. […] Developing green office buildings is just one of the many ways that some U.S. corporations, as described in the March 2008 issue of eJournal USA, are embracing more environmentally friendly ways of doing business. See more photo gallery stories of green buildings at: **http://goo.gl/IPMUB** and complete eJournal at: **http://goo.gl/ju5dN**

Photo Gallery-Green Design: 10 Award-Winning Projects 2009
Every year, the American Institute of Architects (AIA) and its Committee on the Environment (COTE) select the top 10 examples of sustainable architecture and "green" design solutions that protect and enhance the environment. The award-winning projects for 2009 include a synagogue, a family apartment complex, a utility cooperative, a nature center, a school and other noteworthy structures. Click this link: **http://goo.gl/sb3Ge** for a tour of 10 buildings that improve their communities, reduce environmental impact and — just as important — delight the eye.

Video-Greening the Empire State Building
America is adapting to the environmental challenges of tomorrow by renovating even its most iconic building — the Empire State Building. The historic landmark is undergoing a range of energy-saving technology upgrades to make it 40 % more efficient.
Access the video at: **http://goo.gl/0dJcU**
Read more on the project at: **http://goo.gl/xdQC7**

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Sustainable Architecture: Not Just A Buzz Phrase

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LEED-certification is a complex process that rates certain types of structures (mostly retail, businesses and apartment buildings) on criteria such as elements of design, construction and maintenance procedures. According to the USGBC website, a LEED-certified building is an independent verification that a structure has achieved a high level of performance in five key areas: sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

A major goal of sustainable architecture is to create energy efficient buildings, often by using alternative methods of heating, air conditioning and ventilation. Architects rely on elements including solar panels, top-quality insulation, window placement, ceiling fans, strategically planted trees to provide shade, and other things that will ensure the building has as little impact on its environment as possible throughout its life.

The materials with which the building is made also are a factor in the sustainable architecture movement. Often, structures are built incorporating recycled or salvaged materials, such as old rubber tires for a floor, or lumber from fallen trees. Bamboo is another popular substance used in green buildings, as is fabric for carpets made of lower volatile organic compounds (VOC).

As important as how a building is built is how environmentally-conscious those using it are once it is functional. How will waste be managed? What will be reused, reduced, recycled?

The key to sustainable architecture lies in environmental protection. When architects strive for LEED certification – considered the gold standard of the practice – they create buildings that make the best use of the earth's resources. Ultimately, sustainable architecture might one day be called, simply, architecture.

Writer: Melanie Lasoff Levs, Mother Nature Network, June 9, 2011. This article is accessible online at: **http://goo.gl/4MI70**

Related source:
USGBC-U.S. Green Building Council
http://goo.gl/slspe

Highlights

Why Build Green?

The built environment has a vast impact on the natural environment, human health, and the economy. By adopting green building strategies, we can maximize both economic and environmental performance.

Source: **http://goo.gl/23t2B**